IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In the Patent Application of Jesse J. Williams Eric J. Hansen and Lindsay M. Ulman	Group Art Unit: 1796
Serial No.: 10/604,780	Examiner: Lorna M. Douyon
Filed: August 15, 2003	
For: MANUAL SPRAY CLEANER	

APPEAL BRIEF

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Sir:

This is an Appeal Brief pursuant to 37 C.F.R. § 41.37 in support of Appellants' appeal of the Final Rejection of the Examiner, mailed April 4, 2008, of claims 49, 51-52, 54-59, 94-99 and 115. Each of the topics required by 37 C.F.R. § 41.37 is presented herewith and is labeled appropriately.

I. Real Party in Interest

BISSELL Homecare, Inc., a corporation in the State of Michigan, having its principal place of business in the city of Grand Rapids, Michigan, is the real party in interest of the present application. An assignment of all rights in the present application to BISSELL Homecare, Inc. was executed by the inventors and recorded in the U.S. Patent and Trademark Office at Reel/Frame: 010873/0542.

II. Related Appeals and Interferences

A Request for a Pre-Appeal Brief Conference was filed July 7, 2008. The Notice of Decision was mailed July 16, 2008 and received by Appellants on August 25, 2008.

There are no related interferences.

III. STATUS OF CLAIMS

The application has 115 claims, which are presented in the Appendix. Claims 1-49, 51-52, 54-59, 87-113 and 115 are pending. Claims 50, 53, 60-86 and 114 have been cancelled. Claims 1-48, 87-93 and 100-113 are withdrawn from consideration as being drawn to non-elected claims. Accordingly, the Appellants hereby appeal the final rejection of claims 49, 51-52, 54-59, 94-99 and 115.

IV. STATUS OF AMENDMENTS

No amendments were filed subsequent to the final rejection and all previous amendments have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

As called for in claim 49, the invention comprises a manual spray cleaner for removing dirt and stains. *Application, p.13, ¶37, ln.1-5 ; p. 27, ¶55, ln. 1-17.*[1] The manual spray cleaner comprises a first pressure chamber 14 connected with a dispensing spray outlet for dispensing controlled amounts of fluids under pressure from the pressure chamber 14 onto a surface to be cleaned. *Application, p.16, ¶39, ln. 1-8; p. 17, ¶43, ln. 1-6.* The pressure chamber 14 contains a peroxide composition and a propellant to pressurize the oxidizing composition to a level sufficient to spray the composition onto a surface to be cleaned. *Application, p. 31, ¶65, ln. 1-11; p. 32, ¶70, ln. 1-13; p. 33, ¶71, ln. 1-7* . Claim 49 further calls for the first pressure chamber 14 having an inner surface formed wholly from uncoated aluminum. *Application, p.14,*

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[1] 37 CFR §41.37(c)(1)(v) requires reference to the specification by page and line number. The Application was filed without line numbers, but included paragraph numbers. Thus, references are given by page number, paragraph number and the line number of the referenced paragraph as submitted in the specification as filed.

¶37, ln.18-20. The first pressure chamber 14 can also comprise anodized aluminum as set forth in claim 95. *Application, p. 15, ¶38, ln. 21-22.*

The oxidizing composition called for in claim 49 comprises active peroxide in the range of about 0.1-10 % by weight, as set forth in claim 115. *Application, p. 31, ¶66, ln. 7-11.* The oxidizing composition further comprises an anti-soil and/or anti-stain protectant, as set forth in claim 96. *Application, p. 27, ¶55, ln. 2-9; p. 30, ¶65, ln. 1- p. 31, ¶65, ln. 3; p. 32, ¶68, ln. 1-4; Table 1, p.34-37.* The propellant for pressurizing the oxidizing composition in the first chamber 14 comprises dimethyl ether, a fluorinated hydrocarbon or compressed natural gas, as set forth in claim 98. *Application, p. 13, ¶37, ln. 8 – p.14, ¶37, ln. 5; p.28, ¶59, ln. 1 – p.29, ¶59, ln. 2; p. 32, ¶70, ln. 1 – p.33, ¶70, ln. 11; Table 1, p.34-37.* The first chamber can be pressurized to about 45 pounds per square inch, as set forth in claim 99. *Application, p. 33, ¶71, ln. 1-4.*

The dispensing spray outlet called for in claim 49 can comprise a normally closed pressure valve 12, 114 that is connected with a dip tube 22, 122 that extends into the pressure chamber, as called for in claim 55. *Application, Figures 2, 6; p. 13, ¶37, ln. 1-5; p. 18, ¶44, ln. 1-3; p. 19, ¶44, ln. 15-20.* Both the dip tube 22, 122 and the valve 12, 114 can be made from thermoplastic materials that are inert to the oxidizing composition. The dip tube 22, 122 can be made from an olefin polymer and the normally closed valve 12, 114 can be made from nylon as set forth in claims 56 and 57, respectively. *Application, p. 13, ¶37, ln. 5 – p. 14, ¶37, ln. 7; p. 19, ¶45, ln. 1 – p. 20, ¶ 45, ln. 15.*

The dispensing spray outlet called for in claim 49 can comprise a push valve type assembly 110. *Application, Figure 6A; p. 18, ¶44, ln. 1 – p. 19, ¶44, ln. 20.* The push valve assembly 110 can comprise the valve 114 mounted to a solid plunger 124 at a lower end. The valve 114 is hollow near the bottom end with one or two orifices 126 in fluid communication with the hollow interior of the valve 114. The valve 114 can have at least one orifice that has a diameter of about 0.024 inches, as set forth in claim 59. *Application, p. 14, ¶37, ln. 11;p. 33, ¶71, ln. 3.* A gasket 118 is located between the solid plunger 124 and the valve 114. The gasket 118 seals the opening in a valve cup 112 that the valve 114 extends through. As set forth in

claim 94, the gasket 118 can be made from an ethylene propylene diene terpolymer. *Application, p. 20, ¶45, ln. 11-12.* A housing 116 is connected with the underside of the valve cup 112 and surrounds the plunger 124, the gasket 118 and the valve 114. The housing 116 is in fluid communication with the dip tube 122. A spring 120 can be located within the housing 116 to bias the valve 114 in the closed position. As set forth in claim 58, the spring 120 can be made from stainless steel. *Application, p. 20, ¶45, ln. 13-15.*

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. In the Office Action of April 4, 2008, the Examiner rejected claims 49, 51, 52, 54, 96-98 and 115 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 3,488,287 to Seglin et al. (Seglin et al. '287). Appellants appeal the Examiner's holding that Seglin et al. '287 renders claims 49, 51, 52, 54, 96-98 and 115 obvious under 35 U.S.C. §103(a).

2. In the Office Action of April 4, 2008, the Examiner rejected claims 55-56 under 35 U.S.C. §103(a) as unpatentable over Seglin et al. '287 in view of U.S. Patent No. 3,970,584 to Hart et al. (Hart et al. '584). Appellants appeal the Examiner's holding that Seglin et al. '287 and Hart et al. '584 render claims 55-56 obvious under 35 U.S.C. §103(a).

3. In the Office Action of April 4, 2008, the Examiner rejected claim 57 under 35 U.S.C. §103(a) as unpatentable over Seglin et al. '287 in view of U.S. Patent No. 3,722,753 to Miles (Miles '753). Appellants appeal the Examiner's holding that Seglin et al. '287 and Miles '753 render claim 57 obvious under 35 U.S.C. §103(a).

4. In the Office Action of April 4, 2008, the Examiner rejected claims 58-59 under 35 U.S.C. §103(a) as unpatentable over Seglin et al. '287 and Miles '753 and further in view of U.S. Patent No. 5,421,492 to Barger et al. (Barger et al. '492). Appellants appeal the Examiner's holding that Seglin et al. '287, Miles '753 and Barger et al. '492 render claims 58-59 obvious under 35 U.S.C. §103(a).

5. In the Office Action of April 4, 2008, the Examiner rejected claim 94 under 35

U.S.C. §103(a) as unpatentable over Seglin et al. '287 and Hart '584 and further in view of U.S. Patent No. 5,921,447 to Barger et al. (Barger et al. '447). Appellants appeal the Examiner's holding that Seglin et al. '287, Hart '584 and Barger et al. '447 render claim 94 obvious under 35 U.S.C. §103(a).

6. In the Office Action of April 4, 2008, the Examiner rejected claim 95 under 35 U.S.C. §103(a) as unpatentable over Seglin et al. '287 in view of U.S. Patent No. 3,970,219 to Spitzer et al. (Spitzer et al. '219). Appellants appeal the Examiner's holding that Seglin et al. '287 and Spitzer et al. '219 render claim 95 obvious under 35 U.S.C. §103(a).

7. In the Office Action of April 4, 2008, the Examiner rejected claim 99 under 35 U.S.C. §103(a) as unpatentable over Seglin et al. '287 in view of U.S. Patent No. 6,021,926 to Lauwers et al. (Lauwers et al. '926). Appellants appeal the Examiner's holding that Seglin et al. '287 and Lauwers et al. '926 render claim 99 obvious under 35 U.S.C. §103(a).

VII. ARGUMENTS

1. The rejection of claims 49, 51, 52, 54, 96-98 and 115 under 35 U.S.C. §103(a) over Seglin et al. '287 is not supported by the evidence of record.

The pivotal issue on appeal is whether independent claim 49, the sole independent claim on appeal, is properly rejected under 35 U.S.C. §103(a) over Seglin et al. '287. The Examiner's application of the Seglin et al. '287 to claim 49 pervades all of the Examiner's rejections of the claims. None of the secondary references cited by the Examiner in the rejections of paragraphs VI 2-7 above supply the deficiency of Seglin et al. '287 with respect to claim 49. Therefore, if the Board agrees with Appellants as to claim 49, then all of the rejections of the dependent claims on appeal must also be reversed. However, if the Board agrees the Examiners rejection of claim 49 over Seglin et al. '287, then the Board must consider the rejection of claim 96 over Seglin et al. '287 which Appellants believe are independently patentable over Seglin et al. '287 as well as the combinations of Seglin et al. '287 with the secondary references set forth in the rejections of paragraphs VI 2-7 above.

(a) The Examiner has not made a *prima facie* case of unpatentability of claim 49 over Seglin et al. '287.

The rejection of claims 49, 51, 52, 54, 96-98 and 115 does not satisfy the requirements of a §103(a) rejection, and cannot be sustained in that the Examiner has not made a *prima facie* case of unpatentability of claim 49 and its dependent claims 51, 52, 54, 96-98 and 115.

Claim 49 as currently amended reads as follows:

> 49. A manual spray cleaner for removing dirt and stains comprising:
> a first pressure chamber and a dispensing spray outlet for dispensing controlled amounts of fluids under pressure from the pressure chamber onto a surface to be cleaned;
> a peroxide composition within and contained by the pressure chamber, and;
> a propellant mixed with the peroxide composition to pressurize the oxidizing composition within the first pressure chamber to a level sufficient to spray the peroxide composition onto a surface to be cleaned;
> wherein the first pressure chamber has an inner surface formed wholly from uncoated aluminum and the dispensing assembly is made from materials that are inert or resistant to the peroxide composition.

Seglin et al. '287 discloses a method for producing a warm lather. The decomposition of hydrogen peroxide is used to provide heat and gas to foam a soap composition. The peroxide is delivered to a reaction chamber containing a catalyst where it is mixed with a soap solution and decomposed into water and oxygen gas. The decomposition products of hydrogen peroxide, namely, water, oxygen and heat, foam and warm the soap composition. Seglin et al. '287 also incidentally discloses with respect to the first embodiment of Fig 1 that the parts of the container of the peroxide container that come into contact with hydrogen peroxide should be made of suitable materials that do not decompose the peroxide and include plastic, plastic coated metal, stainless steel and aluminum. Seglin et al. '287 discloses several methods for delivering hydrogen peroxide to the reaction chamber, including using a pressure release valve like in an aerosol-type dispenser in connection with the embodiment of Fig. 3. Seglin et al. '287 also discloses that the combined mixture of hydrogen peroxide and soap in the third embodiment of Fig. 3 may be mixed with a nominal amount of a low boiling point propellant to facilitate

delivery of the peroxide to the reaction chamber. The lather that results from the combination of the decomposition products of hydrogen peroxide and the soap composition are delivered to the user through a tube. It is the increase in pressure resulting from the decomposition of hydrogen peroxide that forces the lather into the discharge tube of the container. *Seglin et al. '287, Col. 2, ln. 62-66.*

(1) Seglin et al. '287 fails to reach Appellants' invention of claim 49.

Independent Claim 49 calls for a propellant mixed with the hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned.

Seglin et al. ' 287 does not disclose mixing a propellant with hydrogen peroxide to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned. The hydrogen peroxide in Seglin et al. ' 287 is delivered to a reaction chamber via a tube and an optional pressure valve, not onto a surface to be cleaned through a dispensing spray outlet as set forth in Appellants' claim 49. Further, Seglin et al. ' 287 does not disclose storing hydrogen peroxide with a propellant under pressure high enough to spray the hydrogen peroxide onto a surface to be cleaned. Seglin et al. ' 287 specifically teaches away from storing hydrogen peroxide under a pressure sufficient to spray the peroxide onto a surface to be cleaned. Seglin et al. disclose that one of the advantages of their invention is that it does not require the use of a high pressure system. *Seglin et al. ' 287 , Col. 1, ln. 57-58.*

(2) The Examiner has failed to correctly assess the scope and content of the prior art.

The Examiner has failed to correctly assess the scope and content of the prior art in her application of Seglin et al. '287 to the rejection of claim 49 and its dependent claims. In particular, the Examiner has failed to consider the substantial amount of evidence in the file in determining the scope and content of the prior art and as a result has a flawed interpretation of Seglin et al. '287.

As described above, Seglin et al. '287 discloses a method for producing a warm lather using the decomposition of hydrogen peroxide to provide heat and gas to foam a soap composition. Seglin et al. '287 does not disclose a hydrogen peroxide and a propellant (resulting in an aerosol product) in a container formed from uncoated aluminum. The Examiner actually concedes this point in the Office Action mailed April 4, 2008 stating "Seglin, however, fails to specifically disclose a peroxide-soap composition in an aerosol-type dispenser wherein the inner surface is made of uncoated aluminum." *Office Action, p. 3, ln. 11-13.* However, the Examiner has nevertheless drawn the unwarranted conclusion that it would have been obvious to one skilled in the art to place the hydrogen peroxide and propellant in an uncoated aluminum container. There is no basis in fact for drawing this conclusion from the disclosure of Seglin et al. '287 and is contrary to the evidence of record submitted by Appellants.

Had the Examiner considered the evidence set forth in the article published in *Spray Technology & Marketing*, March 2006 of Dr. Tait, filed with Applicant's Response filed April 4, 2006, (Tait publication), the Declaration Under 37 C.F.R. § 132 of Eric Hanson, filed January 31, 2007, (Hansen Declaration), the Declaration Under 37 CFR § 1.132 of William Stephen Tait, PhD, filed July 17, 2007, (Tait Declaration), and the Declaration Under 37 CFR § 1.132 of Montford A Johnsen, filed October 23, 2006, (Johnsen Declaration) all of record, she could not have reasonably concluded that it would have been obvious to one skilled in the art at the time of the invention to place the peroxide and propellant of Seglin et al. '287 in a container formed wholly from uncoated aluminum – especially at a pressure level sufficient to spray *the peroxide composition* onto a surface to be cleaned.

The Tait Publication unequivocally sets the standard for what is known in the art regarding aerosols and aluminum containers in an independent publication.

> Consequently, uncoated aluminum is very susceptible to corrosion, and aluminum aerosol containers without an internal lining cannot be used with aerosol products. *Tait Publication, col. 3, ln. 46-55.*

The Tait Publication establishes that even as late as 2006, it was understood in the art that

aerosol compositions, especially aqueous aerosols, would not be stable in uncoated aluminum containers. The Tait Publication, in conjunction with the Johnsen Declaration and the Hansen Declaration clearly establish what is known in the art of aerosol compositions and packaging of hydrogen peroxide and aerosol propellant compositions by persons of at least ordinary skill in the art. The stability of the Appellants' hydrogen peroxide and aerosol propellant composition in an uncoated aluminum container is a surprising result that is contrary to what is known in the art regarding packaging of this type of composition.

Mr. Hansen has more than 20 years experience as a chemist in the field of cleaning products. In his Declaration, Mr. Hansen states that "It is widely understood in the aerosol industry that hydrogen peroxide is highly corrosive/reactive, and an aerosol with hydrogen peroxide has not, to my knowledge, been packaged successfully in a metal can." *Hansen Declaration, p. 2, ln. 8-10.* It is known in the art that hydrogen peroxide can react with the metal in a steel can, lined or unlined, resulting in an increase pressure within the can, which can lead to leaks. *Hansen Declaration, p. 2, ln. 14-15.* Mr. Hansen further states that during the development phase, BISSELL surprisingly found that both lined and unlined aluminum cans are able to withstand the pressure increase from varying amount of hydrogen peroxide and aerosol propellant compositions. However, the hydrogen peroxide dislodged the lining in the lined aluminum cans resulting in clogging of the dip tubes making the product unusable. *Hansen Declaration, p. 2, ln. 19-24; p.3, ln. 1-2.* This lead to the surprising result that hydrogen peroxide-aerosol compositions can be stably stored in an uncoated aluminum can and usably dispensed.

The declaration of Mr. Johnsen further validates the surprising nature of the results and establishes what is known in the art to a person of at least ordinary skill in the art. Mr. Johnsen has more than 50 years experience in the aerosol industry. In his declaration, referring to BISSELL's development of the hydrogen peroxide cleaning composition Mr. Johnsen states:

> One of the major problems was the ability to package the hydrogen peroxide composition in an aerosol container of any sort. BISSELL scientists discovered, quite surprisingly, that the hydrogen peroxide composition could be packaged in a

> bare aluminum container, notwithstanding the industry's reluctance to do so and yet could not be packaged in a coated aluminum container because of the contamination from the coating with the aerosol propellant. Insofar as I know, the BISSELL hydrogen peroxide composition is the only hydrogen peroxide aerosol in the country, and furthermore the only aerosol product that is packaged in a bare or uncoated aluminum can, rather than lined. It was only with great difficulty that BISSELL was able to persuade an aluminum aerosol can supplier to produce cans which were uncoated, that is, devoid of the usual organic linings. *Johnsen Declaration, p. 5, ln. 11-20.*

Mr. Johnsen's Declaration attests to the fact that is accepted knowledge in the field of aerosols that hydrogen peroxide and aerosol compositions and in fact aerosols in general must be packaged in coated aluminum cans. This concept is so strongly accepted in the field that it took significant effort on the part of BISSELL to convince an aerosol can supplier to produce uncoated aluminum cans for packaging the hydrogen peroxide and aerosol compositions.

Additional testimony regarding what is known in the art is set for in the Tait Publication. Dr. Tait has more than 29 years experience in the field of corrosion of aerosol containers, and his expert qualifications are set forth in the Tait Declaration.

Therefore, at the time that Appellants made their invention, it would not have been obvious to one skilled in the art to combine the hydrogen peroxide and propellant composition in an aerosol-type container formed from uncoated aluminum as the Examiner asserts. The Examiner has provided no evidence to support her conclusory assertion of obviousness and has flatly ignored the contrary evidence as to the state of the art as set forth by the three experts in the field, Mr. Hansen, Mr. Johnsen and Mr. Tait, as described above.

> Any obviousness rejection should include, either explicitly or implicitly in view of the prior art applied, an indication of the level of ordinary skill....Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art....[T]he analysis supporting a rejection under 35 U.S.C. §103 should be made explicit....[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *MPEP, §2141.II.C.-III.*

The Examiner has not met her burden of showing that it would be obvious in view of Seglin et al. '287 to package a hydrogen peroxide and a propellant (resulting in an aerosol product) in a container formed from uncoated aluminum under a pressure sufficient to spray the peroxide composition onto a surface to be cleaned as set forth in claim 49.

(3) The Examiner failed to show proper motivation for modifying the teachings of the prior art

In addition, the Examiner has failed to show proper motivation for modifying the teachings of the prior art to produce the claimed invention. If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification (see *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). It would not have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Seglin et al. ' 287 to mix a propellant with hydrogen peroxide to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned. Modifying the device of Seglin et al. ' 287 in such a way as to pressurize the hydrogen peroxide composition to a level sufficient to spray the composition onto a surface to be cleaned would yield a device incapable of performing its intended function, which is to produce a warm lather. In order for the Seglin et al. ' 287 dispenser to produce a warm lather, the hydrogen peroxide must be delivered to the reaction chamber at low pressure to react with the catalyst and exothermically decompose into water and gas. Without these decomposition products and heat, no warm lather would be produced and the soap composition would not be dispensed. Seglin et al. ' 287 explicitly states that it is the gas and foam produced from the decomposition of hydrogen peroxide that forces the lather out through of the dispensing tube. *Seglin et al. '287, Col. 2, ln. 62-66.* Therefore, Seglin et al. ' 287 neither expressly nor impliedly suggests a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned as set forth in Appellants' claim 49.

(b) Appellants' evidence successfully rebuts any *prima facie* case of obviousness.

Even if the Seglin et al. '287 reference could be construed as establishing a *prima facie* case of unpatentability, however untenably, the evidence as to the state of the art as set forth by the three experts in the field, Mr. Hansen, Mr. Johnsen and Dr. Tait, as described above clearly rebuts any the Examiner's conclusory statements as to the obviousness of the differences between claim 49 and Seglin et al. '287. For the sake of brevity, Appellants incorporate by reference the arguments made in section VII 1(a) (2) above with respect to the evidence of record in the Hansen Declaration, the Johnsen Declaration and the Tait literature article.

Further, the Hansen and Johnsen declarations attest to the secondary considerations that the Examiner has failed to seriously consider. Mr. Johnsen states in his Declaration that he is not aware of any other hydrogen peroxide aerosol products available in the United States nor any other aerosol products in general in uncoated aluminum containers. *Johnsen Declaration, p. 5, ln. 16-18.* Appellants' first attempts to produce a hydrogen peroxide aerosol product were unsuccessful. *Hansen Declaration, p.2, ln. 21-24. Johnsen Declaration, p. 5, ln. 15-16.* In their initial attempts, Appellants followed established protocol in the field and used aluminum containers with an organic lining. After these attempts proved unsuccessful, they tried using uncoated aluminum containers with the surprising result that the hydrogen peroxide and propellant were stable as an aerosol in an uncoated aluminum container. *Id.* Also, the product based on the concept of claim 49 has been very successful commercially and no hydrogen peroxide containers have been returned due to corrosion. *Hansen Declaration, p. 2, ln. 3-4 and p. 3, ln. 3-5. Johnsen Declaration, p. 5, ln. 23-24.*

(c) Seglin et al. ' 287 does not meet dependent claims 51, 52, 54, 97-98 and 115.

Dependent claims 51, 52, 54, 96-98 and 115 distinguish over Seglin et al. '287 in at least the same manner as claim 49. These claims are believed patentable for the same reason as claim 49.

(d) Seglin et al. ' 287 does not meet dependent claim 96.

In addition to distinguishing over Seglin et al. '287 in the same manner as claim 49, claim 96 distinguishes over Seglin et al. '287 independently in calling and anti-soil and/or an anti-stain protectant in the oxidizing composition. Seglin et al. '287 does not disclose these compounds. There would be no reason to include these compounds in Seglin et al. '287 because Seglin et al. '287 is not concerned with a carpet cleaning composition. The foam soap compositions of Seglin et al. '287 are intended for shaving applications and not for carpet cleaner applications in which anti-soil and anti-stain compounds are used. Although Seglin et al. '287 discloses that the compositions can be used for "other types of lathers such as warm shampoo lathers" (col. 2, lines 11-15), these lathers would likely be hair shampoos and not carpet cleaning compositions. The Examiner has cited col. 5 lines 28-45 as disclosing other additives to the peroxide soap composition, including polyol humectants as possible anti-soil protectants. A humectant is a substance that promotes moisture. An anti-soil protectant is a substance that prevents resoil of a carpet after it has been cleaned due to the presence of soap. It is anything but a substance that promotes moisture. Moisture in a cleaned carpet would promote collection of dirt and promote resoil the carpet. Therefore, claim 96 further distinguishes over Seglin et al. '287.

2. Claims 55 and 56 are not unpatentable under 35 U.S.C. §103(a) over Seglin et al. ' 287 in view of the Hart et al. U.S. Patent No. 3,970,584 (Hart et al. '584 patent).

The rejection of claims 55 and 56 does not satisfy the requirements of a §103(a) rejection, and cannot be sustained in that the asserted combination is not based upon any meaningful rationale and the combination cannot reach the inventions of claims 55 and 56.

Claim 55 indirectly depend from claim 49 and further defines the invention by calling for a manual spray cleaner wherein the dispensing spray outlet comprises a normally closed pressure valve that is connected to a dip tube that extends from the valve into the pressure chamber. The dip tube and valve are made from a thermoplastic material that is inert to the oxidizing composition. Claim 56 directly depends from claim 55 and calls for the dip tube to be made of a thermoplastic material that is an olefin polymer.

Hart et al. '584 relates to an aerosol package for dispensing a foam-forming emulsion mixed with a propellant system. There is no basis for the combination of Hart et al. '584 and Seglin et al. '287. Whereas Seglin et al. '287 uses the decomposition products of hydrogen peroxide to foam the soap composition, Hart et al. '584 uses a propellant system. In addition, Seglin et al. '287 teaches away from this combination by disclosing that lathers formed from propellant systems have undesirable characteristics, namely that the generated foam has a low temperature and that the pressurized dispensers are dangerous. *Seglin et al. ' 287, Col. 1, ln. 46-53.* Further, Seglin et al. '287 specifically discloses that the deficiencies of propellant system-based foams create the need for their invention, namely the ability to produce a warm lather in a safe dispenser that does not rely upon a highly pressurized container. *Seglin et al. ' 287, Col. 1, ln. 53-57.* Seglin et al. '287 and Hart et al. '584 disclose alternative devices and methods for forming a foam having different, mutually exclusive properties. One skilled in the art would be led to choose one or the other, there is no motivation to combine the devices.

Even if the combination were made, however untenably, the alleged combination of Hart et al. '584 patent and Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '287 as set forth above with respect to claim 49. Therefore, claims 55 and 56, which ultimately depend from claim 49, distinguish over the alleged combination of Hart et al. '584 patent and Seglin et al. '287 in the same manner as claim 49.

The Hart et al. '584 patent is cited to disclose a dip tube made of a thermoplastic material such as an olefin polymer. Adding a dip tube to the device of Seglin et al. '287 would still not produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as claimed in the Appellants' invention. The dip tube of Hart et al. '584 would simply deliver the hydrogen peroxide to the reaction chamber of Seglin et al. '287 where it would decompose. The deficiencies of Seglin et al. '287 as stated above would still apply.

3. Claim 57 is not properly met under 35 U.S.C. §103(a) over Seglin et al. ' 287 in view of the Miles U.S. Patent No. 3,722,753 (Miles '753).

The rejection of claim 57 does not satisfy the requirements of a §103(a) rejection, and cannot be sustained in that the asserted combination is not based upon any meaningful rationale and the combination cannot reach the inventions of claim 57.

Claim 57 indirectly depends from claim 49 and is directly dependent from claim 55. As noted above, claim 55 calls for a manual spray cleaner wherein the dispensing spray outlet comprises a normally closed pressure valve that is connected to a dip tube that extends from the valve into the pressure chamber. The dip tube and valve are made from a thermoplastic material that is inert to the oxidizing composition. Claim 57 calls for the valve to be made of a thermoplastic material that is nylon.

Miles et al. '753 discloses a pressurized aerosol container for dispensing fluids comprising a secondary chamber 45 for modifying the temperature of the contents of the container prior to dispensing. The contents of the aerosol container are first transferred to the secondary chamber 45 under pressure from the pressurizing dispensing chamber 11. The temperature of the secondary chamber 45 can be modified by holding the chamber under hot or cold running water. The contents of the secondary chamber 45 can then be dispensed to the user at the modified temperature.

The device of Miles et al. '753 is suitable for use with compositions that utilize pressurized propellant systems to produce a foam. *Miles et al. '783, Col. 8, ln. 55-61.* There is no basis for the combination of Miles et al. '753 and Seglin et al. '287. Whereas Seglin et al. '287 uses the heat produced from the decomposition of hydrogen peroxide to modify the temperature of the foam, Miles et al. '753 uses heat from an external source, such as hot water, to heat the foam. In addition, the compositions disclosed in Miles et al. '753 are propellant-based systems that utilize the propellant to foam the soap. Seglin et al. '287 uses the decomposition products of hydrogen peroxide to foam the soap composition. Seglin et al. '287 teaches away from this combination by disclosing that lathers formed from propellant systems have undesirable characteristics, namely that the generated foam has a low temperature and that the pressurized dispensers are dangerous. *Seglin et al. ' 287, Col. 1, ln. 46-53.* Further, Seglin et al. '287 specifically discloses that the deficiencies of propellant system-based foams create the need

for their invention, namely the ability to produce a warm lather in a safe dispenser that does not rely upon a highly pressurized container. *Seglin et al. '287, Col. 1, ln. 53-57.* Seglin et al. '287 and Miles et al. '753 disclose alternative, mutually exclusive devices and methods for forming a warm foam. One skilled in the art would be led to choose one or the other, there is no motivation to combine the devices.

Even if the combination were made, however untenably, the alleged combination of Miles et al. '753 with Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '287 as set forth above with respect to claim 49. Therefore, claim 57, which ultimately depends from claim 49, distinguishes over the alleged combination of Miles et al. '753 patent and Seglin et al. '287 in the same manner as claim 49.

The alleged combination of Miles '753 with Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '287 patent with respect to Claim 49. The inclusion of a nylon valve in the device of Seglin et al. '287 would still not produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as claimed in the Appellants' invention. The deficiencies of Seglin et al. '287 as stated above would still apply.

4. Claims 58 and 59 are not properly rejected under 35 U.S.C. §103(a) over Seglin et al. ' 287 in view Miles '753 and further in view of the Barger et al. U.S. Patent No. 5,421,492 (Barger et al. '492).

The rejection of claims 58 and 59 does not satisfy the requirements of a §103(a) rejection, and cannot be sustained in that the asserted combination is not based upon any meaningful rationale and the combination cannot reach the inventions of claims 58 and 59.

Claims 58 and 59 indirectly depend from claim 49. Claim 58 calls for the normally closed valve defined in claims 55 and 57 to contain a spring that is made from stainless steel. Claim 59 calls for the normally closed valve defined in claims 55 and 57 to have at least one orifice that has a diameter of about 0.024 inches. As noted above, claim 55 calls for a manual spray cleaner wherein the dispensing spray outlet comprises a normally closed pressure valve

that is connected to a dip tube that extends from the valve into the pressure chamber. The dip tube and valve are made from a thermoplastic material that is inert to the oxidizing composition.

The size of the valve orifice is an integral element of the manual spray cleaner as set forth in claim 49. As noted in the specification, Appellants' found that the valve orifice size, in combination with other elements of the device, such as the propellant pressure, is required to achieve the desired ratio and flow rate of cleaning composition and oxidants and spray pattern for a given distance from the surface to be cleaned. *Application, p.5, ¶54, ln.1-5.*

The arguments against the combination of Miles '753 and Seglin et al. '287 with regards to claim 57 above apply here as well. Barger et al. '492 relates to the dispensing of a controlled metered amount of a medical fluid from an aerosol container. The device disclosed in Barger et al. '492 comprises a reservoir 3 and a metering chamber 7. The valve assembly disclosed in Barger et al. '492 provides for thorough mixing of the composition in the reservoir 3 and the metering chamber 7 prior to dispensing a metered dose of a medicament from the metering chamber 7. The valve arrangement and the purpose of the Barger et al. '492 dispensing apparatus is remarkably different from that of both Miles '753 and Seglin et al. '287. Barger et al. '492 is not related to the dispensing of a foam composition as the Miles '753 and Seglin et al. '287 references are. Barger et al. '492 discloses a metering assembly whereas Miles '753 and Seglin et al. '287 relate to push valve assemblies. It is not seen how the Barger et al. '492 disclosure is related in any significant way to the Miles ' 753 or the Seglin et al. '287 disclosures, other than the disclosure of dispensing of fluids.

In any case, even if the alleged combination were made, however untenably, the combination of Barger et al. '492 with Miles et al. '753 with Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '287 as set forth above with respect to claim 49. Therefore, claims 58 and 59, which ultimately depend from claim 49, distinguish over the alleged combination of Barger et al. '492 with Miles et al. '753 and Seglin et al. '287 in the same manner as claim 49.

The Examiner's rejection is based on a disclosure in Barger et al. '492 that the metering valve 5 connecting the reservoir 3 and metering chamber 7 contains a spring made from stainless steel. The Examiner has offered no motivation or rationale for combining the disclosure of

Barger et al. '492 with Seglin et al. '492 or Miles et al. '753. It is not seen how the combination of these three references can in any way produce the Appellants' invention as set forth in the claim 49 and dependent claim 58. The alleged combination of Barger et al. '492 with Miles et al. '753 and Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '492 patent with respect to claim 49 and the dependent claims therefrom. Including a stainless steel spring in the dispensing valve of Seglin et al. '287 would result in the hydrogen peroxide being delivered to the reaction chamber for decomposition, producing gas and water for mixing with a soap composition. The incorporation of a stainless steel spring in the device of Seglin et al. '287 would still not produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as set forth in claim 49.

In rejecting claim 59, the Examiner asserts, without support, that it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the diameter of the orifice through routine experimentation for best results. On the contrary, the valve orifice size is not a result of routine experimentation, but of describing an invention for delivering a cleaning composition comprising an active oxidizing agent to a surface to be cleaned and thus solving the problem discussed in the specification. This problem is not recognized in the cited references and thus would not be addressed by those working in the art with knowledge of the cited references. A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since the references cited by the Examiner do not recognize the problem the Appellants are addressing nor that the variable is a result-effective variable, the optimum size of the valve orifice as claimed by the Appellants can not be rejected as merely the result of routine experimentation.

5. Claim 94 is not properly rejected under 35 U.S.C. §103(a) over Seglin et al. ' 287 in view

Hart '584 and further in view of the Barger et al. U.S. Patent No. 5,921,447(Barger et al. '447)

The rejection of claim 94 does not satisfy the requirements of a §103(a) rejection, and cannot be sustained in that the asserted combination is not based upon any meaningful rationale and the combination cannot reach the inventions of claim 94.

Claim 94 is indirectly dependent from claim 49 and directly dependent from claim 55. Claim 94 calls for the dispensing assembly described in claim 55 to further comprise a gasket to seal the first chamber. The gasket is made from an ethylene propylene diene terpolymer. The gasket 118 is located between the valve stem 114 and the plunger 124. The gasket 118 seals the housing 116 from the valve 112 when the actuator 62 is not depressed.

The Barger et al. '447 patent, like the Barger et al. '492 patent, relates to metered dispensing of medical fluids from an aerosol container whereas Hart et al. '584 and Seglin et al. '287 relate to dispensing of foam materials. It is believed that these disclosures are unrelated. The arguments against the combination of Hart '584 and Seglin et al. '287 with regards to claims 55 and 56 above apply here as well.

With regards to Barger et al. '447, Barger et al. '447 relates to the dispensing of a controlled metered amount of a medical fluid from an aerosol container. The device disclosed in Barger et al. '447 comprises a reservoir 3 and a metering chamber 7. The valve assembly disclosed in Barger et al. '447 provides for thorough mixing of the composition in the reservoir 3 and the metering chamber 7 prior to dispensing a metered dose of a medicament from the metering chamber 7. The valve arrangement and the purpose of the Barger et al. '447 dispensing apparatus are remarkably different from that of both Hart '584 and Seglin et al. '287. Barger et al. '447 is not related to the dispensing of a foam composition as the Hart '584 and Seglin et al. '287 references are. It is not seen how the Barger et al. '447 disclosure is related in any significant way to the Hart ' 584 and Seglin et al. '287 disclosures, other than the disclosure of dispensing of fluids.

The Examiner's rejection is based on a disclosure in Barger et al. '447 sealing gaskets 37 can be connected with sealing pads 29 that seal ports 9 in the metering chamber 7 (see Figure

2A). *Barger et al. '447, col. 7, ln. 67 – col. 8, ln. 1-14.* These sealing gaskets 37 can be made of propylene diene terpolymer. *Barger et al. '447, Col. 10, ln. 46-48.* The metering device disclosed in Barger et al. '447 is very different from Appellants' push valve assembly 110 (see Figures 6 and 6A). The Examiner has offered no motivation or rationale for combining the disclosure of Barger et al. '447 with Seglin et al. '492 or Miles et al. '753. It is not seen how the combination of these three references can in any way produce the Appellants' invention as set forth in the claim 49 and dependent claim 58.

However, even if the alleged combination of Seglin et al. '287, Hart et al. '584, and Barger et al. '447 were to be combined, however untenably, it still would not meet Appellants' claimed invention. At best, the alleged combination of these references would simply add a gasket made of ethylene propylene diene terpolymer to the alleged combination of Seglin et al. ' 287 and Hart et al. '584. This combination would still only result in delivery of hydrogen peroxide under low pressure sufficient to allow the peroxide to decompose into gas and water to the reaction chamber of Seglin et al. '287. The combination would still not produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as set forth in Appellants' claim 49. This alleged combination would not meet the deficiencies of claim 49 from which claim 94 ultimately depends for all of the same reasons as set forth above with respect to the distinction of claim 49 over the Seglin et al. '287 patent.

6. Claim 95 is not properly rejected under 35 U.S.C. §103(a) over Seglin et al. ' 287 in view of the Spitzer et al. U.S. Patent No. 4,019,657 (Spitzer et al. '657).

The rejection of claims 95 does not satisfy the requirements of a §103(a) rejection, and cannot be sustained in that the asserted combination is not based upon any meaningful rationale and the combination cannot reach the inventions of claim 95.

Claim 95 is directly dependent from claim 49 and calls for a manual cleaner wherein the aluminum in the first chamber is anodized.

Spitzer et al. '657 discloses foaming an aerosol composition to produce a fine spray that

requires less propellant than traditional aerosol containers. The propellant is stored separately from the aerosol composition and is used to foam the aerosol composition prior to propelling the composition through the dispenser. Spitzer et al. '219 also discloses a laundry list of containers that can be used for aerosol components, however, there is no disclosure in Spitzer et al. '219 of a hydrogen peroxide aerosol composition in any of these containers.

There is no basis for the combination of Spitzer et al. '657 with Seglin et al. '287. Whereas Seglin et al. '287 uses the decomposition products of hydrogen peroxide to foam the soap composition, Spitzer et al. '657 uses a propellant system. In addition, Seglin et al. '287 teaches away from this combination by disclosing that lathers formed from propellant systems have undesirable characteristics, namely that the generated foam has a low temperature and that the pressurized dispensers are dangerous. *Seglin et al. ' 287, Col. 1, ln. 46-53.* Further, Seglin et al. '287 specifically discloses that the deficiencies of propellant system-based foams create the need for their invention, namely the ability to produce a warm lather in a safe dispenser that does not rely upon a highly pressurized container. *Seglin et al. ' 287, Col. 1, ln. 53-57.* Seglin et al. '287 and Spitzer et al. '657 disclose alternative devices and methods for forming a foam having different, mutually exclusive properties. One skilled in the art would be led to choose one or the other, there is no motivation to combine the devices.

However, even if the alleged combination is made, however untenably, the combination still would not meet Appellants' claimed invention. Claim 95 depends from claim 49 and defines over the alleged combination of Spitzer et al. '657 and Seglin et al. '287 in the same manner as claim 49. The alleged combination of these references would simply provide an anodized aluminum container for the peroxide containing container of Seglin et al. The combination does not overcome the inability of the device of Seglin et al. ' 287 to produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as claimed in the Appellants' invention.

7. Claim 99 is not properly rejected under 35 U.S.C. §103(a) over Seglin et al. ' 287 in view

of the Lauwers et al. U.S. Patent No. 6,021,926 (Lauwers et al. '926)

The rejection of claim 99 does not satisfy the requirements of a §103(a) rejection, and cannot be sustained in that the asserted combination is not based upon any meaningful rationale and the combination cannot reach the inventions of claim 99.

Claim 99 is directly dependent from claim 49 and calls for the first chamber to be pressurized to about 45 pounds per square inch.

The Lauwers et al. '926 reference discloses an aerosol container comprising a foaming detergent composition, including a propellant gas such as carbon dioxide, nitrous oxides and mixtures thereof. Whereas the Lauwers et al. '926 reference relates to an aerosol package which has a relatively high pressure, the Seglin et al. '287 reference relates to a low-pressure container which forms foam and does not have a dispensing spray outlet for dispensing controlled amounts of fluid under pressure from the pressure chamber onto a surface to be cleaned.

There is no basis for the combination of Lauwers et al. '926 and Seglin et al. '287. The Seglin et al. '287 uses the decomposition products of hydrogen peroxide to foam the soap composition, Lauwers et al. '926 uses a propellant system. In addition, Seglin et al. '287 teaches away from this combination by disclosing that lathers formed from propellant systems have undesirable characteristics, namely that the generated foam has a low temperature and that the pressurized dispensers are dangerous. *Seglin et al. ' 287, Col. 1, ln. 46-53.* Further, Seglin et al. '287 specifically discloses that the deficiencies of propellant system-based foams create the need for their invention, namely the ability to produce a warm lather in a safe dispenser that does not rely upon a highly pressurized container. *Seglin et al. ' 287, Col. 1, ln. 53-57.* Seglin et al. '287 and Lauwers et al. '926 disclose alternative devices and methods for forming a foam having different, mutually exclusive properties. One skilled in the art would be led to choose one or the other, there is no motivation to combine the devices.

Even if the alleged combination of Lauwers et al. '926 and Seglin et al. '287 were made, however untenably, the combination would still not meet the Appellants' claimed invention. As noted above, it would not have been obvious to modify the device of Seglin et al. ' 287 to store the hydrogen peroxide at a pressure to a level sufficient to spray the peroxide composition onto a

surface to be cleaned. The alleged combination may result in a pressure or 45 psi in the Seglin et al. ' 287 hydrogen peroxide container, but that would not result in a system that would be able to dispense the hydrogen peroxide solution onto a surface to be cleaned. In order to incorporate the Lauwers et al. '926 teaching into Seglin et al. '287, the resulting foam dispenser would have to accommodate the higher pressures of the hydrogen peroxide solution in the mixing chamber to decompose the hydrogen peroxide solution and foam the soap composition *before* the soap composition is dispensed from the reaction chamber. The hydrogen peroxide must enter the reaction chamber and react with a catalyst and decompose to a level sufficient to produce heat and gas to foam the soap composition and thus would not reach the surface to be cleaned. All of the hydrogen peroxide must be reacted prior to the foam composition is dispensed on the surface. It is the pressure of the foam that dispenses the foam composition from the reaction camber and not any pressure of the hydrogen peroxide in the hydrogen peroxide container. Thus, the alleged combination of Lauwers et al. '926 and Seglin et al. '287 would not reach the claimed invention of dispensing the hydrogen peroxide solution onto a surface to be cleaned.

CONCLUSION

In view of the foregoing, it is submitted that the rejection of claims 49, 51-52, 54-59, 94-99 and 115 is improper and should not be sustained. Therefore, a reversal of the rejections of claims 49, 51-52, 54-59, 94-99 and 115 on all grounds is respectfully requested.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. (Withdrawn) A manual spray cleaner for removing dirt and stains from fabrics and carpets comprising:

a container having two separate chambers and a single dispensing spray outlet for dispensing controlled amounts of liquids from each of the chambers;

one of the chambers has a fabric/carpet cleaning composition therein and the other chamber has an oxidizing composition that enhances the cleanability of the fabric/carpet cleaning composition;

a dispensing system for simultaneously dispensing the fabric/carpet cleaning composition and the oxidizing composition from their respective chambers, mixing the two compositions together, and dispensing a mixture of the compositions from the container under pressure.

2. (Withdrawn) A manual spray cleaner according to claim 1 wherein the oxidizing composition includes a fabric/carpet protectant.

3. (Withdrawn) A manual spray cleaner according to claim 1 wherein the dispensing system is adapted to mix the two compositions together in the single dispensing spray outlet before they are sprayed from the dispensing spray outlet.

4. (Withdrawn) A manual spray cleaner according to claim 1 wherein the dispensing system is adapted to mix the two compositions together at the surface of the fabric or carpet and after they are sprayed from the dispensing spray outlet.

5. (Withdrawn) A manual spray cleaner according to claim 1 wherein the dispensing system includes aerosol propellants in each of the two separate chambers.

6. (Withdrawn) A manual spray cleaner according to claim 1 wherein the dispensing system comprises a mechanical pump for drawing the two compositions from their respective chambers.

7. (Withdrawn) A manual spray cleaner according to claim 1 wherein the fabric/carpet cleaning composition comprises one or more cleaning solvents, a surfactant and, optionally, a fragrance.

8. (Withdrawn) A manual spray cleaner according to claim 7 wherein the fabric/carpet cleaning composition further includes a pH adjusting agent to maintain a pH in the cleaning solution between 7.5 and 12.0 in order to trigger release of oxygen in the oxidizing composition.

9. (Withdrawn) A manual spray cleaner according to claim 8 wherein the pH of oxidizing solution is in the range of about 1.5 to about 8.5.

10. (Withdrawn) A manual spray cleaner according to claim 9 wherein the pH of oxidizing solution is about 6.8.

11. (Withdrawn) A manual spray cleaner according to claim 10 wherein the pH of the cleaning solution is about 9.5.

12. (Withdrawn) A manual spray cleaner according to claim 11 wherein the cleaning composition includes at least one of an anti-resoil and anti-stain agent.

13. (Withdrawn) A manual spray cleaner according to claim 12 wherein the oxidizing composition includes deionized water, a peroxide compound, a stabilizer and, optionally, anti-soil and/or anti-stain protectants.

14. (Withdrawn) A manual spray cleaner according to claim 13 wherein the peroxide compound in the oxidizing composition is hydrogen peroxide.

15. (Withdrawn) A manual spray cleaner according to claim 7 wherein the fabric/carpet cleaning composition further includes at least one of an anti-resoil and anti-stain agent.

16. (Withdrawn) A manual spray cleaner according to claim 1 wherein the fabric/carpet cleaning composition further includes at least one of an anti-resoil and anti-stain agent.

17. (Withdrawn) A manual spray cleaner according to claim 1 wherein the oxidizing composition includes deionized water, a peroxide compound, a stabilizer and, optionally, anti-soil and/or anti-stain protectants.

18. (Withdrawn) A manual spray cleaner according to claim 17 wherein the peroxide compound in the oxidizing composition is hydrogen peroxide.

19. (Withdrawn) A manual spray cleaner according to claim 1 wherein each of the container chambers further comprises an aerosol, an outlet with a valve assembly to control the flow of fluid through the outlet, and a dip tube connected to the valve assembly for dispensing liquid under pressure from each of the chambers.

20. (Withdrawn) A manual spray cleaner according to claim 19 wherein the valve assembly in the oxidizing composition chamber further comprises a vapor tap to relieve excess pressure from the chamber.

21. (Withdrawn) A manual spray cleaner according to claim 20 wherein the vapor tap comprises an orifice in the range of 0.001 to 0.020 inches in diameter.

22. (Withdrawn) A manual spray cleaner according to claim 19 wherein the valve assembly further comprises a gasket to seal the valve assembly chamber.

23. (Withdrawn) A manual spray cleaner according to claim 22 wherein the gasket material in the oxidizing composition chamber is ethylene propylene diene terpolymer.

24. (Withdrawn) A manual spray cleaner according to claim 19 wherein the valve for the chamber that contains the oxidizing composition has valve components that are made from nylon.

25. (Withdrawn) A manual spray cleaner according to claim 24 wherein the valve for the chamber that contains the cleaning composition has valve components that are made from polypropylene.

26. (Withdrawn) A manual spray cleaner according to claim 25 wherein the chamber that has the oxidizing composition is made from aluminum and has a coating of a material inert to the peroxide compound on inner walls of chamber that are in contact with the oxidizing composition.

27. (Withdrawn) A manual spray cleaner according to claim 26 wherein the inert material coating is selected from the group consisting of polyolefins, epoxy phenolics, polyamide-imides, and vinyl organisols.

28. (Withdrawn) A manual spray cleaner according to claim 27 wherein the chamber that has the oxidizing composition is formed in part by a cup, and the outlet opening for

the chamber is positioned in the cup, and the cup is formed of aluminum and has a coating of a material inert to the peroxide compound.

29. (Withdrawn) A manual spray cleaner according to claim 28 wherein the inert material coating that coats the cup is selected from the group consisting of polyolefins, epoxy phenolics, polyamide-imides, and vinyl organisols.

30. (Withdrawn) A manual spray cleaner according to claim 29 wherein the inert material that forms the dip tube and that is coated on the inner surface of the chamber that has the oxidizing composition is a polyolefin.

31. (Withdrawn) A manual spray cleaner according to claim 26 wherein the valves have at least one orifice having a diameter of about 0.020 –0.024 inches.

32. (Withdrawn) A manual spray cleaner according to claim 31 wherein the aerosol propellant for the chamber that has the oxidizing composition is a fluorinated hydrocarbon and the valve for the chamber that has the oxidizing composition has one orifice.

33. (Withdrawn) A manual spray cleaner according to claim 32 wherein chamber that has the oxidizing composition is pressurized at about 70 pounds per square inch.

34. (Withdrawn) A manual spray cleaner according to claim 33 wherein aerosol propellant for the chamber that has the cleaning composition is dimethyl ether and the valve for the chamber that has the cleaning composition has two orifices.

35. (Withdrawn) A manual spray cleaner according to claim 34 wherein the chamber that has the cleaning composition is pressurized at about 40 pounds per square inch.

36. (Withdrawn) A manual spray cleaner according to claim 25 wherein the chamber that has the oxidizing agent is made from steel and has a coating of a material inert to the peroxide compound on inner walls of chamber that are in contact with the oxidizing composition.

37. (Withdrawn) A manual spray cleaner according to claim 36 wherein the inert material coating is selected from the group consisting of polyolefins, epoxy phenolics, polyamide-imides, and vinyl organisols.

38. (Withdrawn) A manual spray cleaner according to claim 37 wherein the

chamber that has the oxidizing agent is formed in part by a cup, and the outlet opening for the chamber is positioned in the cup, and the cup is formed of steel and has a coating of a material inert to the peroxide compound.

39. (Withdrawn) A manual spray cleaner according to claim 38 wherein the inert material coating that coats the cup is selected from the group consisting of polyolefins, epoxy phenolics, polyamide-imides, and vinyl organisols.

40. (Withdrawn) A manual spray cleaner according to claim 39 wherein the inert material that forms the dip tube and that is coated on the inner surface of the chamber that has the oxidizing agent is a polyolefin.

41. (Withdrawn) A manual spray cleaner according to claim 36 wherein the valves have at least one orifice having a diameter of about 0.020 –0.024 inches.

42. (Withdrawn) A manual spray cleaner according to claim 41 wherein the aerosol propellant for the chamber that has the oxidizing composition is a fluorinated hydrocarbon and the valve for the chamber that has the oxidizing composition has one orifice.

43. (Withdrawn) A manual spray cleaner according to claim 42 wherein chamber that has the oxidizing composition is pressurized at about 70 pounds per square inch.

44. (Withdrawn) A manual spray cleaner according to claim 43 wherein aerosol propellant for the chamber that has the cleaning composition is dimethyl ether and the valve for the chamber that has the cleaning composition has two orifices.

45. (Withdrawn) A manual spray cleaner according to claim 44 wherein the chamber that has the cleaning composition is pressurized at about 40 pounds per square inch.

46. (Withdrawn) A manual spray cleaner according to claim 38 wherein the chamber that has the oxidizing agent and the cup are formed from zinc-plated steel.

47. (Withdrawn) A manual spray cleaner according to claim 1 wherein the single dispensing spray outlet has a mechanical breakup plug and a terminal orifice to mix and disperse the mixture of the compositions into a spray pattern.

48. (Withdrawn) A manual spray cleaner according to claim 47 wherein the terminal office has a diameter in the range of about 0.020-0.040 inches.

49. (Previously Amended) A manual spray cleaner for removing dirt and stains comprising:

a first pressure chamber and a dispensing spray outlet for dispensing controlled amounts of fluids under pressure from the pressure chamber onto a surface to be cleaned;

a peroxide composition within and contained by the pressure chamber, and;

a propellant mixed with the peroxide composition to pressurize the oxidizing composition within the first pressure chamber to a level sufficient to spray the peroxide composition onto a surface to be cleaned;

wherein the first pressure chamber has an inner surface formed wholly from uncoated aluminum and the dispensing assembly is made from materials that are inert or resistant to the peroxide composition.

50. (Cancelled)

51. (Previously Presented) A manual spray cleaner for removing dirt and stains according to claim 49 wherein the peroxide composition includes deionized water, a peroxide compound, a stabilizer and, optionally, anti-soil and/or anti-stain protectants.

52. (Original.) A manual spray cleaner according to claim 51 wherein the peroxide compound is hydrogen peroxide.

53. (Cancelled)

54. (Previously Presented) A manual spray cleaner for removing dirt and stains according to claim 49 wherein the first pressure chamber is made from drawn aluminum.

55. (Original.) A manual spray cleaner for removing dirt and stains according to claim 54 wherein the dispensing spray outlet comprises a normally closed pressure valve that is connected to a dip tube that extends from the normally closed valve into the chamber, and wherein both the dip tube and the normally closed valve are made from thermoplastic materials that are inert to the oxidizing composition.

56. (Original.) A manual spray cleaner for removing dirt and stains according to claim 55 wherein the thermoplastic material for the dip tube is an olefin polymer.

57. (Original.) A manual spray cleaner for removing dirt and stains according to claim 56

wherein the thermoplastic material for the normally closed valve is nylon.

58. (Original.) A manual spray cleaner for removing dirt and stains according to claim 57 wherein the normally closed valve contains a spring that is made from stainless steel.

59. (Original.) A manual spray cleaner for removing dirt and stains according to claim 58 wherein the normally closed valve has at least one orifice having a diameter of about 0.024 inches.

60-86. (Cancelled)

87. (Withdrawn) An aerosol package for simultaneously dispensing two different fluids from separate chambers comprising:

a first container having a first fluid therein under pressure and having a first dispensing outlet controlled by a first valve;

a second container, if fixed abutting relationship to the first container, having a second fluid, different from the first fluid, therein under pressure and having a second dispensing outlet controlled by a second valve; and

a dispenser having a dispensing orifice fluidly connected to each of the first and second dispensing outlets and an actuator connected to each of the first and second valves for simultaneously opening each of the first and second valves to simultaneously dispense fluids from the first and second containers.

88. (Withdrawn) An aerosol package according to claim 87 wherein the dispensing orifice is positioned at one side of the first container distal from the second container.

89. (Withdrawn) An aerosol package according to claim 87 wherein the two containers are joined together with an adhesive.

90. (Withdrawn) An aerosol package according to claim 87 wherein the two containers have a thin film stretched around them.

91. (Withdrawn) An aerosol package according to claim 90 wherein the film is at least partially transparent.

92. (Withdrawn) An aerosol package according to claim 87 wherein the dispenser comprises an integrally molded body that includes a handle and the actuator, and the actuator is

resiliently cantilevered from a portion of the body.

93. (Withdrawn) An aerosol package according to claim 92 wherein the molded body further includes an integral channel between the first and second dispensing outlets and the dispensing orifice.

94. (Previously Presented) A manual cleaner according to claim 55 wherein the dispensing assembly further comprises a gasket to seal the first chamber and the gasket material is an ethylene propylene diene terpolymer.

95. (Previously Presented) A manual cleaner according to claim 49 wherein the aluminum within the first chamber is anodized.

96. (Previously Presented) A manual cleaner according claim 49 wherein the oxidizing composition further comprises an anti-soil and/or anti-stain protectant.

97. (Previously Presented) A manual cleaner according to claim 49 wherein the first chamber is formed in part by a cup, and the outlet opening for the first chamber is positioned in the cup, and the cup is formed wholly of uncoated aluminum.

98. (Previously Presented) A manual cleaner according to claim 49 wherein the propellant for the first chamber is dimethyl ether, a fluorinated hydrocarbon or compressed natural gas.

99. (Previously Presented) A manual cleaner according to claim 49 wherein the first chamber is pressurized to about 45 pounds per square inch.

100. (Withdrawn) A manual cleaner according to claim 49 and further comprising:

a second chamber that has a fabric/carpet cleaning composition therein and that is mounted adjacent the first chamber; and

a dispensing system for simultaneously dispensing the fabric/carpet cleaning composition and the peroxide composition from their respective chambers' outlet under pressure.

101. (Withdrawn) A manual cleaner according to claim 100 wherein at least one of the fabric/carpet cleaning composition and the oxidizing composition includes a fabric/carpet protectant.

102. (Withdrawn) A manual cleaner according to claim 101 wherein the fabric/carpet

protectant includes at least one of an anti-resoil and anti-stain agent.

103. (Withdrawn) A manual cleaner according to claim 100 wherein the dispensing system is adapted to mix the two compositions together at the surface of the fabric or carpet and after they are dispensed from the dispensing outlet.

104. (Withdrawn) A manual cleaner according to claim 100 wherein the dispensing system includes an aerosol propellant in the second chamber.

105. (Withdrawn) A manual cleaner according to claim 104 wherein the aerosol propellant for the second chamber comprises dimethyl ether and the valve for the second chamber has two orifices.

106. (Withdrawn) A manual cleaner according to claim 105 wherein the second chamber has a pressure of about 40 pounds per square inch.

107. (Withdrawn) A manual cleaner according to claim 100 wherein the fabric/carpet cleaning composition comprises one or more of cleaning solvents, a surfactant and a fragrance.

108. (Withdrawn) A manual cleaner according to any of claim 100 wherein the fabric/carpet cleaning composition includes a pH adjusting agent to maintain a pH in the cleaning solution between 7.5 and 12.0 in order to trigger release of oxygen in the oxidizing composition when the two compositions are mixed together.

109. (Withdrawn) A manual cleaner according to claim 108 wherein the pH of oxidizing solution is in the range of about 1.5 to about 8.5.

110. (Withdrawn) A manual cleaner according to claim 108 wherein the pH of oxidizing solution is about 6.8.

111. (Withdrawn) A manual cleaner according to claim 109 wherein the pH of the cleaning solution is about 9.5.

112. (Withdrawn) A manual cleaner according to claim 100 wherein the dispensing system is adapted to mix the two compositions together in a single dispensing outlet before they are dispensed from the dispensing outlet.

113. (Withdrawn) A manual cleaner according to claim 112 wherein the single dispensing outlet has a mechanical breakup plug and a terminal orifice to mix and disperse the

mixture of the compositions into a pattern.

114. (Cancelled)

115. (Previously presented) A manual spray cleaner according to claim 49 wherein the concentration of the active peroxide in the peroxide composition is in the range of about 0.1% - 10% by weight.

IX. EVIDENCE APPENDIX

1. The attached article by Stephen Tait, PH.D, entitled "CORROSIVE BEHAVIOR: PART 1," March 2006, Spray Technology and Marketing, pg. 49, was previously filed and considered by the Examiner before issuing the Office Action of July 12, 2006.

2. The attached Declaration under 37 C.F.R. 1.132 of William Stephen Tait, PhD was previously filed and considered by the Examiner before issuing the Office Action of October 9, 2007.

3. The attached Declaration under 37 C.F.R. 1.132 of Montfort A. Johnsen was previously filed and considered by the Examiner before issuing the Office Action of April 17, 2007.

4. The attached Declaration under 37 C.F.R. 1.132 of Eric J. Hansen was previously filed and considered by the Examiner before issuing the Office Action of April 17, 2007.

X. Related Proceedings Appendix

There being no decision rendered by a court or the Board in any related proceedings, none is listed here.